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Cpy #7

26 November 1963

USAF Declass/Release Instructions On File

MEMORANDUM FOR: Deputy Director for Technology
Office of Special Activities

SUBJECT : Status of U-2 Carrier Modifications (U-2C)

1. In a conversation with Kelly Johnson on the telephone the week of 18 November, he informed me that LAC had completed the low speed tunnel tests on the carrier version of the U-2. You will recall that these were commenced in October in order to determine what steps could be taken to shave some knots from the U-2 stall speed.
2. The final fix, according to Kelly, will be a leading edge flap not too different from the Krueger flap on the Boeing 707 which will be cockpit-actuated and extend nearly the complete length of the leading edge of the wing. Kelly refers to this as a "Jetstar style leading edge flap." I assume that this configuration was adopted for patent reasons, since it is my recollection that Boeing owns the patent on the Krueger flap.
3. According to Kelly, when combined with 45 degrees of flap travel (as opposed to 30 degrees at present) this configuration will take 7 knots from the stall speed without creating an unfavorable angle of attack such as was experienced early in the tunnel tests when reliance was being placed upon the letter slot system with modified upper wing speed brakes. Kelly added that in this final configuration the L/D ratio of the U-2 drops from its present 9.6 to a figure of 7, while the angle of attack is more than 6 degrees. I asked him if he were adequately funded for these tests and he said that he felt he might need a small amount of money over the original \$16,000 figure which we approved, but he was not yet prepared to say how much it would be. He also does not have the final weight penalty for this flap system, although on the basis of his earlier conversations I would judge that it is probably less than the letter slot/speed brake system.

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